

## SEQUENCE LISTING

<110> BAUDY FLOCH, MICHELE  
BUSNEL, OLIVIER  
MULLER, SYLVIANE

<120> PROTOZOAN STRAINS OF REDUCED VIRULENCE AND USE THEREOF

<130> 0508-1150

<140> 10/560,163

<141> 2005-12-09

<150> PCT/FR04/001467

<151> 2004-06-11

<150> FR 03/06992

<151> 2003-06-11

<160> 6

<170> PatentIn Ver. 3.3

<210> 1

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
primer

<400> 1

gaattcgata tgacagggtc tccg

24

<210> 2

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
primer

<400> 2

ctcgagcagt caccatgttg gcag

24

<210> 3

<211> 1122

<212> DNA

<213> Leishmania infantum

<400> 3

atgacagcgt ctccgagagc gccacatcag gagcatgtcc tcggagagcc gaccttggaa 60  
gggcttgccg actacatcag ggagaagaat gtgcggcgca ttctcgtgct cgtcggagca 120  
ggcgccagtg tagctgccgg catcccagac ttctcgtcac ctgacaccgg gatctacgcc 180

```

aacctcggca agtacaacct cgaagaccg accgatgcct ttctactgac ctttctgcgc 240
gagaagccag agatattcta ctctatcgca cgggagctga acttgtggcc tgggcacttt 300
cagcccaccg cgggtacatca cttcatccga ctgttgcaag acgagggccg tctcctgcgc 360
tgctgcacgc agaacattga cggcctggag aaggcagcgg gcgtgtcgcc ggagctcctc 420
gtcgaggcgc atggctcttt cgctgctgcc gcctgcattg aatgccacac accattcagc 480
attgagcaga actacctgga ggcgatgagc ggtacggtct cccgctgctc tacatgcggc 540
ggcattgtga agcccaacgt cgttttcttt ggtgaaaatt tgccggacgc gttcttcgac 600
gcgctgcacc acgacgcccc gatcgcgagg ctgggtcatca tcatcgggac atcgatgcag 660
gtgcaccctg tcgcgttgct gccgtgcgtc gtgcccgaag cagtcccgcg cgttgtcatg 720
aaccgtgagc gagttggcgg cctcctcttc cgctttcctg atgaccgcgt caacaccgtc 780
cacgaggatg cggttgccaa ggaggagcgc tcgtcctctt cgcagagtcg tccccgtcc 840
gcgtcgccac ggcgcgagga ggggggaaca gaggacagcc cctcgtcgcc aaacgaggag 900
gtcgaagagg cgtcgacgtc cagctcgagc gacggctacg ggcagtacgg tgactaccac 960
gccacccccg atgtctgccg ggatgttctc ttccgcggcg actgccagga gaacgtggtg 1020
acgctggcgg agtacctggg tctgagcgag gcgctggcaa agcgcagtcg cttatccgat 1080
gcagcaccag ctactgcaca gaggcgccg aatgagacgt ga 1122

```

<210> 4  
 <211> 1146  
 <212> DNA  
 <213> *Leishmania major*

```

<400> 4
atgacagggg ctccgagagc gccgcatcag gaacatgccc tcggagagcc gactgtggaa 60
gggcttgccg gctacatcag ggagaaggat gtgcggcgca ttctcgtgct cgtcggagca 120
ggcgccacgc tagctgccgg catcccagac ttctcgtcat ctgacaccgg gatctacgcc 180
aagctcggca agtacaacct cgacgaccgc accgatgcct ttctcgtgac tcttctgcgc 240
gagaagccag agatattcta ctctatcgca cgggagctga acttgtggcc tgggcacttt 300
cagcccaccg cgggtgcatca cttcatccga ctgttgcaag acgagggccg tcttctgcgc 360
tgctgcacgc agaacattga tggctcggag aaggcagcgg gcgtgtcgcc ggagctcctg 420
gtcgaggcgc atgggtcttt cgctgccgcc gcctgcatcg aatgccacac gccattcagc 480
attgagcaga actacctgga ggcgatgagc ggcacgggtg cccgctgctc tacatgcggc 540
ggcattgtga agcccaacgt cgttttcttt ggtgaaaatt tgccggacgc gttcttcgac 600
gcgctgcacc acgacgcccc gatcgcgagg ctgggtcatca tcatcgggac atcgatgcag 660
gtgcaccctg tcgcgttact gccgtgcgtc gtgcccgaag ccatcccgcg cgttctcatg 720
aaccgcgagc gagttggcgg cctcctcttc cgctttcctg atgaccgcgt cgacaccatc 780
cacgacgatg cggttgccaa ggaggagcgc tcgtcctctt cgcagagccg tccccgtcc 840
gcgtcgccgc ggcgcgagga gggggggacg gaggacggct cctcgtcgcc gaacgaggag 900
gtcgaagacg cgtcgacgtc cagttcgagt gacggctacg gtcagtacgg tgactactac 960
gccacccccg atgtctgccg ggatgttttc ttccgcggcg actgccagga gaacgtgctg 1020
aagctggcgg agtgctggg cctcagggag gcgctggcaa agcgcagtcg ttctccggtg 1080
cggcaccagc tacggcacga aagacgtcga atgagacgtg agtctgaatt gctgccaaca 1140
tggtga 1146

```

<210> 5  
 <211> 775  
 <212> DNA  
 <213> *Leishmania amazonensis*

```

<400> 5
ccctccaacc tagcaagtag aacctcgacg acccgaccga cgccttttca ctgacccttc 60
tgcgggagag acccgagata ttctactcga tcgcacggga gctgaacttg tggcctgggc 120
actttcagcc caccceggta catcacttca tccgactgtt gcaagatgag ggtcgtctac 180
tgctgtgctg cagcgagaac attgacggcc tggagaaggc cgcgggcgtg tcgccagagc 240
tctcgtcga ggcacatggg tcttttgctg ccgcgcctg cattgaatgc cacacgccat 300
tcagcattga gcagaactac ctggaggcga tgagcggtag ggtctcccgc tgctctacat 360

```

```

gcgggcggaat tgtaaaacca aacgttggtt ttttcggtga aaatttgccg gacgctttct 420
tcgacgcgct acaccacgat gcccgcgacg cggagctgac tatcatcatc gggacatcga 480
tgcaggtgca cccgttcgcg ctgctgccgt gcgtcggtgc caagtcagtc ccgcgcgttg 540
tcatgaaccg cgagcgagtt ggtggcctcc ttttcgctt tctgatgac ccgctgaaca 600
ctgtccacga cgatgcggtt gccaaggagg gtcaatcgtc ttcttcgcag agtcgttccc 660
catccgcgtc ggcgcggtgc gagaaggagg gggtagagga cagatcttca tcgccgaagg 720
aggaggtcga cgaagcgctc acgtccggct cgagcgacgg ctacgggcag tacgg 775

```

<210> 6

<211> 1056

<212> DNA

<213> Trypanosoma brucei

<400> 6

```

atgacagaac cgaagtttagc aaccacgcac gtagtgggtg aacccacctt cgaaggactg 60
gcacggttca ttgagcgaaa caacatcacc aaaaatattg ttatggtggg cgcagggata 120
agcgttgtag ctggaatccc cgacttcgac tctccccaca ccggcttgta cgctaaactc 180
agtcgctaca atctcaactc accggaggag gccttctcac tccctctctt gcgtcaacaa 240
ccaagtgtgt tttacaacat tctgatggat atggacctct ggcccgggaa gtattgtcct 300
acgacggttc accactttat cagtctactc gccaaagaagg gcatgttatt atgctgttgt 360
acgcagaaca tagacgggtt ggaacgcgcc tcgccaattc cagagtcttt actagttgaa 420
gcccatgggt ccttctcttc cgcacatcat gttagactgtc acgcgaaata tgacatcaac 480
atcgcgaggg cggagacaag ggctggaaaa gtgcctcatt gcaatcaatg tgggtggata 540
gtgaaacccg acgtgggttt ctttggcgag aatctcccgg aggcgttttt taacgtagcg 600
ggactcattg aggaaacgga attgctgctt attttgggaa cctcacttca agtccaccca 660
tttgccgacc ttgcgctcat ggtgccctct gacgtgccac gactgttgtt taacttggag 720
cgtgtgggag ggaggatggt ccgctttcct acggaccgaa caccgaattt ccgcgccagt 780
tcctatcgtc tcagcactgg aaatggcaat ggcagtaaaa ttagcagtgg ggacagcagc 840
agcagcagca gcgtcgacgg gtatgaccag tttacgctcg cagagaatga cgagacgggt 900
gtgttgcggt acattttctt tccgtgtgac tgtcaggtgt ctgttcgttc ctttgtctag 960
gcgttgggct tcggagagca gcttgacgcc tctgtacgtg agggaaggga aatatttgag 1020
cgcactcggc gtagggaaaa agtcgttgag ggttaa 1056

```